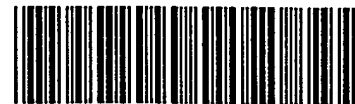


## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/554, 237A  
Source: IFWP  
Date Processed by STIC: 03/22/2007

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IFWP

## RAW SEQUENCE LISTING

DATE: 03/22/2007

PATENT APPLICATION: US/10/554,237A

TIME: 09:37:43

Input Set : F:\3-12-07 SEQUENCE LISTING as filed.txt

Output Set: N:\CRF4\03222007\J554237A.raw

3 <110> APPLICANT: Hexima Limited  
 4 La Trobe University  
 5 Anderson, Marilyn, Anne (US ONLY)  
 6 Heath, Robyn, Louise (US ONLY)  
 7 Dunse, Kerry, Michelle (US ONLY)  
 9 <120> TITLE OF INVENTION: Novel insect enzymes and inhibitors thereof  
 11 <130> FILE REFERENCE: 12440340/EJH  
 W--> 12 <140> CURRENT APPLICATION NUMBER: 10/554,237A  
 C--> 13 <141> CURRENT FILING DATE: 2005-10-21  
 13 <150> PRIOR APPLICATION NUMBER: US 60/465,054  
 14 <151> PRIOR FILING DATE: 2003-04-23  
 16 <160> NUMBER OF SEQ ID NOS: 93  
 18 <170> SOFTWARE: PatentIn version 3.2  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 5  
 22 <212> TYPE: PRT  
 23 <213> ORGANISM: artificial sequence  
 25 <220> FEATURE:  
 26 <223> OTHER INFORMATION: linker sequence  
 28 <400> SEQUENCE: 1  
 30 Glu Glu Lys Lys Asn  
 31 1 5  
 34 <210> SEQ ID NO: 2  
 35 <211> LENGTH: 219  
 36 <212> TYPE: PRT  
 37 <213> ORGANISM: Helicoverpa sp  
 39 <400> SEQUENCE: 2  
 41 Ile Val Gly Gly Ser Leu Ser Ser Val Gly Gln Ile Pro Tyr Gln Ala  
 42 1 5 10 15  
 45 Gly Leu Val Ile Asp Leu Ala Gly Gly Gln Ala Val Cys Gly Gly Ser  
 46 20 25 30  
 49 Leu Ile Ser Ala Ser Arg Val Leu Thr Ala Ala His Cys Trp Phe Asp  
 50 35 40 45  
 53 Gly Gln Asn Gln Ala Trp Arg Phe Thr Val Val Leu Val Met His Gly  
 54 50 55 60  
 58 Ser Trp Thr Pro Ser Leu Ile Arg Asn Asp Val Ala Val Ile Arg Leu  
 59 65 70 75 80  
 62 Gly Thr Asn Val Ala Thr Ser Asn Thr Ile Ala Ile Ile Ala Leu Pro  
 63 85 90 95  
 66 Ser Gly Ser Gln Ile Asn Glu Asn Phe Ala Gly Glu Thr Ala Leu Ala  
 67 100 105 110  
 70 Ser Gly Phe Gly Leu Thr Ser Asp Thr Gly Ser Ile Ser Ser Asn Gln  
 71 115 120 125

## RAW SEQUENCE LISTING

DATE: 03/22/2007

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TIME: 09:37:43

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Output Set: N:\CRF4\03222007\J554237A.raw

74 Ala Leu Ser His Val Asn Leu Pro Val Ile Thr Asn Ala Val Cys Arg  
 75 130 135 140  
 78 Asn Ser Phe Pro Leu Leu Ile Gln Asp Ser Asn Ile Cys Thr Ser Gly  
 79 145 150 155 160  
 82 Ala Asn Gly Arg Ser Thr Cys Arg Gly Asp Ser Gly Gly Pro Leu Val  
 83 165 170 175  
 86 Val Thr Arg Asn Asn Arg Pro Leu Leu Ile Gly Ile Thr Ser Phe Gly  
 87 180 185 190  
 90 Ser Ala Arg Gly Cys Gln Val Gly Ser Pro Ala Ala Phe Ala Arg Val  
 91 195 200 205  
 94 Thr Ser Tyr Ile Ser Trp Ile Asn Gly Gln Leu  
 95 210 215

98 &lt;210&gt; SEQ ID NO: 3

99 &lt;211&gt; LENGTH: 40

100 &lt;212&gt; TYPE: PRT

101 &lt;213&gt; ORGANISM: Helicoverpa sp

103 &lt;400&gt; SEQUENCE: 3

105 Val His Leu Glu Asp Ser Ile Asp Leu Glu Asp Ile Thr Ala Trp Gly

106 1 5 10 15

109 Tyr Leu Thr Lys Phe Gly Ile Pro Glu Ala Glu Lys Ile Arg Asn Ala

110 20 25 30

113 Glu Glu Ala Ser Ser Ala Ser Arg

114 35 40

117 &lt;210&gt; SEQ ID NO: 4

118 &lt;211&gt; LENGTH: 708

119 &lt;212&gt; TYPE: DNA

120 &lt;213&gt; ORGANISM: Helicoverpa sp

122 &lt;400&gt; SEQUENCE: 4

123 atcgctcggtg gttcattgtc cagtgtcgga cagatccctt accaggctgg tctcgtcatt 60

125 gacttagcag gtggccaggc tgtctgcgga ggctccctga tcagcgcttc ccgcgtactg 120

127 accgctgctc actgctgggt cgacggccaa aaccaggcct ggagattcac cgttggttctt 180

129 ggttccacca ccttggttctc tggcggtacc agaatcccta catccaatgt tggtatgcac 240

131 ggaagctgga ctctagcct tatccgtaac gatgttgccg taatcagatt gggcaccaac 300

133 gtagcaacct caaacacccat tgccatcatc gctctaccca gcggcagcca gatcaacgag 360

135 aacttcgccc gtgaaaccgc cctcgctctc ggcttcggtc tcaccagtga caccggcagc 420

137 atctccagca accaggctct gagccacgtc aacctgccag tgatcaccaa cgctgtgtgc 480

139 agaaattcat tccccctgct gatccaggac tctaacattt gcaccagcgg tgccaacggc 540

141 aggagcactt gccgcggtga ctccggcggt cctctcgtcg tcaccaggaa caacagacca 600

143 ctcttgatcg gtatcacctc tttcggtatc gcccgcggtt gccaaagttg atctcccgt 660

145 gccttcgcca gagtcacctc ttacatcagc tggatcaacg gccagctc 708

148 &lt;210&gt; SEQ ID NO: 5

149 &lt;211&gt; LENGTH: 120

150 &lt;212&gt; TYPE: DNA

151 &lt;213&gt; ORGANISM: Helicoverpa sp

153 &lt;400&gt; SEQUENCE: 5

154 gttcacctcg aggattctat tgatctggaa gatattaccg cttggggata cctcaccaaa 60

156 ttcggtattc cagaagctga gaaaatccgc aacgctgaag aagctagctc tgctagcagg 120

159 &lt;210&gt; SEQ ID NO: 6

160 &lt;211&gt; LENGTH: 921

## RAW SEQUENCE LISTING

DATE: 03/22/2007

PATENT APPLICATION: US/10/554,237A

TIME: 09:37:43

Input Set : F:\3-12-07 SEQUENCE LISTING as filed.txt

Output Set: N:\CRF4\03222007\J554237A.raw

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161 <212> TYPE: DNA
162 <213> ORGANISM: Helicoverpa sp
164 <400> SEQUENCE: 6
165 gttcacctcg aggattctat tgatctggaa gatattaccg cttggggata cctcaccaaa      60
167 ttcggtattc cagaagctga gaaaatccgc aacgctgaag aagctagctc tgctagcagg      120
169 atcgctcggtg gttcattgtc cagtgtcgga cagatccctt accaggctgg tctcgtcatt      180
171 gacttagcag gtggccaggc tgtctgcgga ggctccctga tcagcgcttc ccgcgtactg      240
173 accgctgctc actgctgggt cgacggccaa aaccaggcct ggagattcac cgttgttctt      300
175 ggttccacca ccttgttctc tggcgggtacc agaatcccta catccaatgt tgttatgcac      360
177 ggaagctgga ctctagcct tatccgtaac gatgttgccg taatcagatt gggcaccaac      420
179 gtagcaacct caaacaccat tgccatcatc gctctacca gcggcagcca gatcaacgag      480
181 aacttcgccc gtgaaaccgc cctcgccctc ggcttcgggc tcaccagtga caccggcagc      540
183 atctccagca accaggctct gagccacgtc aacctgccag tgatcaccaa cgctgtgtgc      600
185 agaaattcat tccccctgct gatccaggac tctaacattt gcaccagcgg tgccaacggc      660
187 aggagcactt gccgcggtga ctccggcggt cctctcgctc tcaccaggaa caacagacca      720
189 ctcttgatcg gtatcacctc ttctggatct gcccgcggtt gccaaagttg atctcccgct      780
191 gccttcgcca gagtcacctc ttacatcagc tggatcaacg gccagctcta aaatatcgaa      840
193 cattttgcca tatctacaga gatattttga aatacggttaa tttaaataaa tattttattt      900
195 attcaaaaaa aaaaaaaaaa a                                     921
198 <210> SEQ ID NO: 7
199 <211> LENGTH: 32
200 <212> TYPE: DNA
201 <213> ORGANISM: artificial sequence
203 <220> FEATURE:
204 <223> OTHER INFORMATION: BamHI oligonucleotide primer
206 <400> SEQUENCE: 7
207 gaccagccgg atccgatcgg atatgcacca ac                                     32
210 <210> SEQ ID NO: 8
211 <211> LENGTH: 34
212 <212> TYPE: DNA
213 <213> ORGANISM: artificial sequence
215 <220> FEATURE:
216 <223> OTHER INFORMATION: HindIII oligonucleotide primer
218 <400> SEQUENCE: 8
219 ggagccaagc caagctttga acgcgggcaa actc                                     34
223 <210> SEQ ID NO: 9
224 <211> LENGTH: 36
225 <212> TYPE: PRT
226 <213> ORGANISM: artificial sequence
228 <220> FEATURE:
229 <223> OTHER INFORMATION: N-terminal sequence of resistant chymotrypsin
231 <400> SEQUENCE: 9
233 Ile Val Gly Gly Ser Leu Ser Ser Val Gly Gln Ile Pro Tyr Gln Ala
234 1          5          10          15
237 Gly Leu Val Ile Asp Leu Ala Gly Gly Gln Ala Val Cys Gly Gly Ser
238          20          25          30
241 Leu Ile Ser Ala
242          35
245 <210> SEQ ID NO: 10

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## RAW SEQUENCE LISTING

DATE: 03/22/2007

PATENT APPLICATION: US/10/554,237A

TIME: 09:37:43

Input Set : F:\3-12-07 SEQUENCE LISTING as filed.txt

Output Set: N:\CRF4\03222007\J554237A.raw

246 <211> LENGTH: 29  
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 248 <213> ORGANISM: artificial sequence  
 250 <220> FEATURE:  
 251 <223> OTHER INFORMATION: Fw2ResChy primer  
 253 <400> SEQUENCE: 10  
 254 tcagctgtag ctggagctca agatactcc 29  
 257 <210> SEQ ID NO: 11  
 258 <211> LENGTH: 35  
 259 <212> TYPE: DNA  
 260 <213> ORGANISM: artificial sequence  
 262 <220> FEATURE:  
 263 <223> OTHER INFORMATION: FwResChym primer  
 265 <400> SEQUENCE: 11  
 266 gtagctatac tgactctagc tgcagctgga gctgg 35  
 269 <210> SEQ ID NO: 12  
 270 <211> LENGTH: 21  
 271 <212> TYPE: DNA  
 272 <213> ORGANISM: artificial sequence  
 274 <220> FEATURE:  
 275 <223> OTHER INFORMATION: Hc35PQE-6-Fw primer  
 277 <400> SEQUENCE: 12  
 278 ttaaccatgg tgatcgacct c 21  
 281 <210> SEQ ID NO: 13  
 282 <211> LENGTH: 23  
 283 <212> TYPE: DNA  
 284 <213> ORGANISM: artificial sequence  
 286 <220> FEATURE:  
 287 <223> OTHER INFORMATION: Hc35PQ-60-Rv primer  
 289 <400> SEQUENCE: 13  
 290 gatgagatct gagacgttgg ttg 23  
 293 <210> SEQ ID NO: 14  
 294 <211> LENGTH: 25  
 295 <212> TYPE: DNA  
 296 <213> ORGANISM: artificial sequence  
 298 <220> FEATURE:  
 299 <223> OTHER INFORMATION: gene specific sense primer  
 301 <400> SEQUENCE: 14  
 302 cgggatccat ggagtcaaag tttgc 25  
 305 <210> SEQ ID NO: 15  
 306 <211> LENGTH: 25  
 307 <212> TYPE: DNA  
 308 <213> ORGANISM: artificial sequence  
 310 <220> FEATURE:  
 311 <223> OTHER INFORMATION: gene specific antisense primer  
 313 <400> SEQUENCE: 15  
 314 gcgtcgacgc ttaagccacc ctagg 25  
 317 <210> SEQ ID NO: 16  
 318 <211> LENGTH: 24

## RAW SEQUENCE LISTING

DATE: 03/22/2007

PATENT APPLICATION: US/10/554,237A

TIME: 09:37:43

Input Set : F:\3-12-07 SEQUENCE LISTING as filed.txt

Output Set: N:\CRF4\03222007\J554237A.raw

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319 <212> TYPE: DNA
320 <213> ORGANISM: artificial sequence
322 <220> FEATURE:
323 <223> OTHER INFORMATION: StPOTIA sense primer
325 <400> SEQUENCE: 16
326 cgggatccaa ggaatcggaa tctg 24
330 <210> SEQ ID NO: 17
331 <211> LENGTH: 23
332 <212> TYPE: DNA
333 <213> ORGANISM: artificial sequence
335 <220> FEATURE:
336 <223> OTHER INFORMATION: StPOTIB sense primer
338 <400> SEQUENCE: 17
339 cgggatccaa ggaattgaa tgc 23
342 <210> SEQ ID NO: 18
343 <211> LENGTH: 22
344 <212> TYPE: DNA
345 <213> ORGANISM: artificial sequence
347 <220> FEATURE:
348 <223> OTHER INFORMATION: StPOTIA/B antisense primer
350 <400> SEQUENCE: 18
351 cgagctctta agccacccta gg 22
354 <210> SEQ ID NO: 19
355 <211> LENGTH: 40
356 <212> TYPE: DNA
357 <213> ORGANISM: artificial sequence
359 <220> FEATURE:
360 <223> OTHER INFORMATION: FWBacRECHI (5'-3') primer
362 <400> SEQUENCE: 19
363 ttggctttcg ccgcggtcgt ctccgcgagg aacgggtccc 40
366 <210> SEQ ID NO: 20
367 <211> LENGTH: 40
368 <212> TYPE: DNA
369 <213> ORGANISM: artificial sequence
371 <220> FEATURE:
372 <223> OTHER INFORMATION: FWBacRECH2 (5'-3') primer
374 <400> SEQUENCE: 20
375 ggatccatga aactcttggc tgtgactcta ttggctttcg 40
379 <210> SEQ ID NO: 21
380 <211> LENGTH: 25
381 <212> TYPE: DNA
382 <213> ORGANISM: artificial sequence
384 <220> FEATURE:
385 <223> OTHER INFORMATION: RvRECH (3'-5') primer
387 <400> SEQUENCE: 21
388 gatcaacggc cagctctaaa agctt 25
391 <210> SEQ ID NO: 22
392 <211> LENGTH: 53
393 <212> TYPE: PRT

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VERIFICATION SUMMARY

DATE: 03/22/2007

PATENT APPLICATION: US/10/554,237A

TIME: 09:37:44

Input Set : F:\3-12-07 SEQUENCE LISTING as filed.txt

Output Set: N:\CRF4\03222007\J554237A.raw

L:12 M:283 W: Missing Blank Line separator, <140> field identifier

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date